

# USER'S MANUAL

## **GOT115-319**

**All-in-One  
15" XGA TFT Fanless Touch Panel  
Computer with Intel® Celeron®  
Processor N3350 onboard or Intel®  
Pentium® Processor N4200**

**User's Manual**



[www.axiomtek.com](http://www.axiomtek.com)

## **Disclaimers**

This manual has been carefully checked and believed to contain accurate information. Axiomtek Co., Ltd. assumes no responsibility for any infringements of patents or rights of any third party, and any liability arising from such use.

Axiomtek does not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information in this document. Axiomtek does not make any commitment to update the information in this manual.

Axiomtek reserves the right to change or revise this document and/or product at any time without notice.

No part of this document may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Axiomtek Co., Ltd.

## **CAUTION**

Wrong type of batteries may cause explosion. It is recommended that users only replace with the same or equivalent type of batteries as suggested by the manufacturer once properly disposing of any used ones.

**©Copyright 2020 Axiomtek Co., Ltd.**

**All Rights Reserved**

**June 2020, Version A2**

**Printed in Taiwan**

## Safety Precautions

Before getting started, read the following important precautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
2. Disconnect all power cords from the GOT115-319 Series before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the GOT115-319 series is properly grounded.
3. Do not open the top cover of the system. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
  - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
  - When handling boards and components, wear a grounding wrist strap, available from most electronic component stores.

## Trademark Acknowledgments

Axiomtek is a trademark of Axiomtek Co., Ltd.

Windows<sup>®</sup> is a trademark of Microsoft Corporation.

IBM, PC/AT, PS/2, VGA are trademarks of International Business Machines Corporation.

Intel<sup>®</sup> and Pentium<sup>®</sup> are trademarks of Intel Corporation.

AMI is a trademark of American Megatrend Inc.

Other brand names and trademarks are the properties and registered brands of their respective owners.

# Table of Contents

---

|  |           |
|--|-----------|
| Disclaimers.....                                 | ii        |
| Safety Precautions.....                          | iii       |
| <b>Chapter 1 Introduction.....</b>               | <b>1</b>  |
| 1.1 General Description .....                    | 1         |
| 1.2 GOT115-319 Specifications .....              | 2         |
| 1.2.1 Main CPU Board .....                       | 2         |
| 1.2.2 I/O System.....                            | 2         |
| 1.2.3 System Specifications .....                | 3         |
| 1.3 Dimensions.....                              | 4         |
| 1.4 I/O Outlets .....                            | 5         |
| 1.5 Packing List .....                           | 6         |
| <b>Chapter 2 Hardware and Installation .....</b> | <b>7</b>  |
| 2.1 Jumper and Connector Settings.....           | 7         |
| 2.1.1 Jumper Settings .....                      | 8         |
| 2.1.2 Connector Settings.....                    | 9         |
| 2.2 Mountings – Panel/Wall/Desktop/VESA .....    | 13        |
| 2.2.1 Panel-Mounting (optional) .....            | 13        |
| 2.2.2 Assembling the Wall Mount Bracket .....    | 14        |
| 2.2.3 Assembling the stand.....                  | 15        |
| 2.3 Storage Installation.....                    | 16        |
| 2.3.1 mSATA Installation .....                   | 16        |
| 2.3.2 MicroSD Card Installation .....            | 17        |
| 2.3.3 HDD Installation .....                     | 18        |
| 2.4 DRAM Installation .....                      | 20        |
| 2.5 M.2 Wireless Card Installation .....         | 21        |
| 2.6 Power Input (DC cable).....                  | 22        |
| <b>Chapter 3 AMI BIOS Setup Utility .....</b>    | <b>23</b> |
| 3.1 Navigation Keys .....                        | 23        |
| 3.2 Main Menu.....                               | 24        |
| 3.3 Advanced Menu.....                           | 25        |
| 3.3.1 Serial Port Configuration .....            | 26        |
| 3.3.2 Hardware Monitor.....                      | 27        |
| 3.3.3 ACPI Settings .....                        | 28        |
| 3.3.4 CPU Configuration .....                    | 29        |

|                   |   |           |
|-------------------|---|-----------|
| 3.3.5             | SATA Configuration .....                        | 30        |
| 3.3.6             | USB Configuration.....                          | 31        |
| <b>3.4</b>        | <b>Chipset Menu.....</b>                        | <b>32</b> |
| 3.4.1             | North Bridge .....                              | 33        |
| 3.4.2             | South Bridge.....                               | 34        |
| <b>3.5</b>        | <b>Security Menu.....</b>                       | <b>35</b> |
| <b>3.6</b>        | <b>Boot Menu.....</b>                           | <b>36</b> |
| <b>3.7</b>        | <b>Save &amp; Exit Menu .....</b>               | <b>37</b> |
| <br>              |   |           |
| <b>Chapter 4</b>  | <b>Drivers Installation .....</b>               | <b>39</b> |
| <br>              |   |           |
| <b>4.1</b>        | <b>System .....</b>                             | <b>39</b> |
| 4.1.1             | Windows 10.....                                 | 39        |
| <b>4.2</b>        | <b>Touch Screen.....</b>                        | <b>40</b> |
| <br>              |   |           |
| <b>Appendix A</b> | <b>Watchdog Timer &amp; DIO Programming ...</b> | <b>41</b> |
| <br>              |   |           |
|                   | About Watchdog Timer.....                       | 41        |
|                   | How to Use Watchdog Timer.....                  | 41        |
|                   | WDT Sample Program .....                        | 43        |
|                   | How to Use DIO Software Programming.....        | 43        |

**This page is intentionally left blank.**

# Chapter 1

## Introduction

Chapter 1 contains general information and detailed specification of the GOT115-319, which includes the following sections:

- General Description
- Specifications
- Dimensions
- I/O Outlets
- Package List

### 1.1 General Description

GOT115-319 is a fanless and compact-size touch panel computer, equipped with a 15" TFT LCD display and low power consumption processor, Intel® Celeron® Processor N3350 (with 2M cache, up to 2.4 GHz) or Intel® Pentium® Processor N4200 (with 2M Cache, up to 2.5 GHz). It is compatible with Windows 10 and supports one mSATA for storage and one M.2 card slot for wireless connection. It has excellent ID design and friendly user interface which make it a professional yet easy-to-use panel computer. The GOT115-319 is an ideal model for applications with limited spaces in factory automation, building automation and more.

#### **GOT115-319: 15" TFT XGA Fanless Touch Panel Computer**

- **Reliable and stable design**  
GOT115-319 adopts a fanless cooling system which makes it suitable for harsh environments susceptible to dust, vibration, etc.
- **Embedded O.S. supported**  
GOT115-319 supports not only Windows 10 (64bit), but also embedded O.S. In terms of storage device, it supports one mSATA SSD.
- **Industrial-grade product design**  
GOT115-319 is adaptively designed to be used in different industrial environments. It comes with an IP65-rated front panel and IPX1 water ingress protection for the whole enclosure.

For connecting other devices, GOT115-319 also has several IO interfaces: USB, Ethernet and RS-232/422/485.

## 1.2 GOT115-319 Specifications

### 1.2.1 Main CPU Board

- **CPU**
  - Intel® Celeron® Dual Core Processor N3350 (2M Cache, up to 2.4 GHz) onboard.
  - Intel® Pentium® Quad Core Processor N4200 (2M Cache, up to 2.5 GHz) onboard.
- **System memory**
  - 1x 204-pin DDR3L-1600 SO-DIMM socket
  - Up to 8 GB Max.
- **BIOS**
  - American Megatrends BIOS

### 1.2.2 I/O System

- **Standard I/O**
  - 1x RS-232/422/485
  - 1x RS-232
  - 2x USB 3.0
  - 2x USB 2.0
- **Ethernet**
  - 2x RJ45 Giga Ethernet
- **Expansion**
  - 1x M.2(E Key) slot for wireless module
- **Audio**
  - 2x internal 2W Speaker
  - 1x Line out
  - Built-in microphone (on the bottom side of the front panel)
- **Storage**
  - 1x mSATA
  - 1x MicroSD Card slot
  - 1x 2.5" SATA HDD/SSD
- **Power connector**
  - GOT115-319 DC : 9~24 VDC power input with cable for screw type connector to DC source for 9~24V DC



### 1.2.3 System Specifications

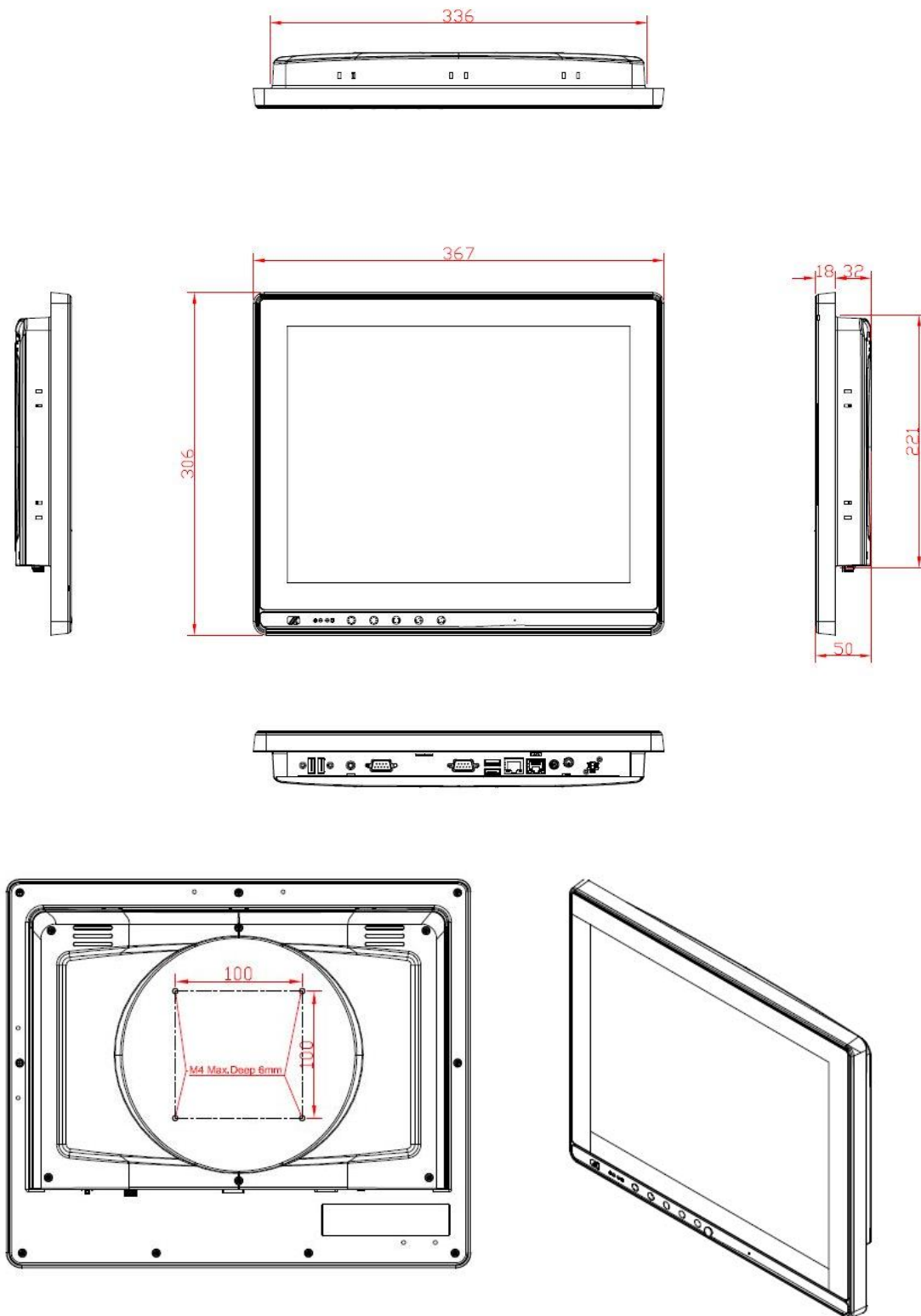
- **15" XGA (1024 x 768) LCD with LED backlight**
- **Projected capacitive multi-touch or 5 wired resistive touch**
- **Fanless heat dissipation design**
- **Disk drive housing**
  - 1x mSATA
  - 1x MicroSD card slot
  - 1x 2.5" SATA HDD/SSD
- **Net weight**
  - 3.2kg
- **Dimension (main body size)**
  - 329 mm (W) x 306 mm (H) x 50.0 mm (D)
- **Operation temperature**
  - 0°C to 50°C
- **Relative humidity**
  - 10% to 90% @ 40°C, -non-condensing
- **Vibration**
  - 2.0 G, 5 to 500 Hz, random (with SSD or mSATA storage)
- **Power input**
  - Optional External 12V 60W AC adapter
    - Power input: 100 to 240 VAC
    - Power output: 12 VDC, Max. 5A
  - Cable for screw type connector to DC source for 9~24V DC



**NOTE** All specifications and images are subject to change without notice.

## 1.3 Dimensions

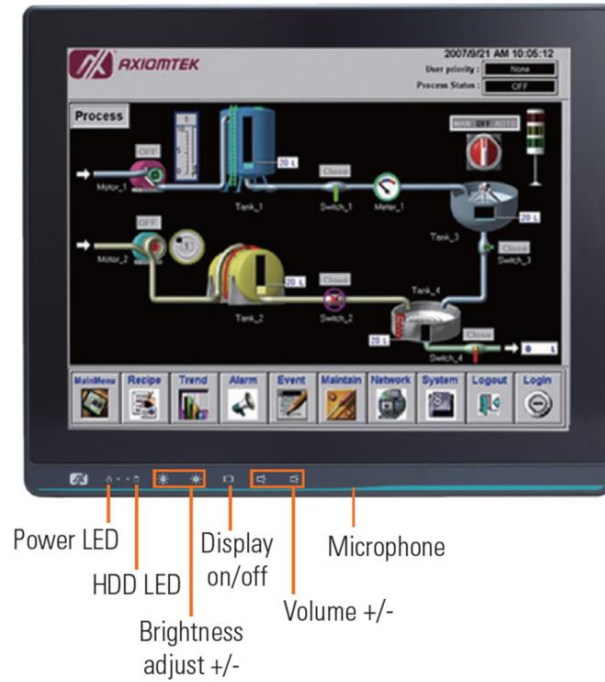
GOT115-319 outlines and dimensions



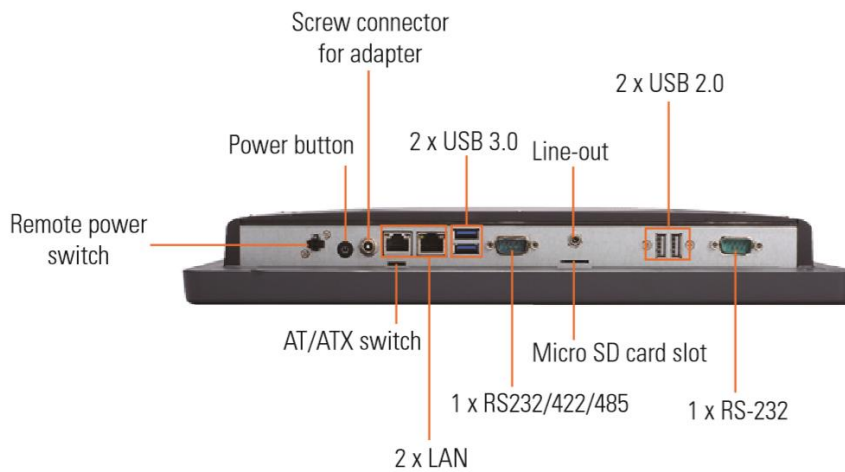
## 1.4 I/O Outlets

Please refer to Figures 1-1 and 1-2 for controls and I/O locations at the bottom of the GOT115-319.

**Figure 1-1 Front view of the GOT115-319**



**Figure 1-2 Bottom view and back view of the GOT115-319**





## 1.5 Packing List

Accessories package of the GOT115-319 should contain the following items:

- GOT115-319 x 1
- DC cable (GOT115-319-DC)
- M3 Screw for M.2 card slot
- M2 screw for mSATA card slot
- Adapter x 1 (Optional)

Please contact an Axiomtek distributor immediately if any item is missing.

# Chapter 2

## Hardware and Installation

The GOT115-319 provides rich I/O ports and flexible expansions for users to meet different demands. This section is describing hardware installation, including the following subsections:

- Jumper and Connector Settings
- Port Definitions
- Hardware Installation
- Mounting Methods
- Connecting the Power Input

### 2.1 Jumper and Connector Settings

Diagram 2-1 Component side of the board



Diagram 2-2 Solder side of the board



### 2.1.1 Jumper Settings

By making proper jumper settings, users can configure the board **SBC87319** to suit the needs of their applications.

Table 2-1 shows the default jumper settings for the SBC87319.

Table 2-1 Default jumper settings

| Jumper | ★ Default Setting                                  | Jumper Setting         |
|--------|--|------------------------|
| JP3    | ★ Normal<br>Clear CMOS                             | Short 1-2<br>Short 2-3 |
| JP2    | ★ LVDS Panel Power : 3.3V<br>LVDS Panel Power : 5V | Short 1-2<br>Short 2-3 |



**NOTE:** Items marked with ★ are for default settings.

## 2.1.2 Connector Settings

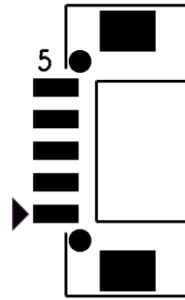
The connectors on the CPU board allow the CPU board to connect with other parts of the system. Ensure that all connectors are in place and firmly attached. Table 2-2 lists the function of each connector on the board SBC87319.

**Table 2-2 Connector Settings**

| Label     | Connectors   |
|-----------|--|
| CN4       | Speaker connector  |
| CN5       | SIM socket   |
| CN7       | Mini PCI-Express Card socket or mSATA                      |
| CN11      | USB2.0 connector ( <i>optional with touch controller</i> ) |
| CN15      | USB2.0 connector   |
| CN17      | DIO connector  |
| CN19      | M.2 E key 2230 type  |
| CN23      | USB3.0 connector   |
| CN24      | Power DC in connector                                      |
| SW1       | Power button   |
| LAN1/LAN2 | Ethernet connector   |
| COM1      | COM Port connector   |
| COM2      | COM Port connector   |
| SW2       | AT/ATX switch  |
| SCN1      | SD card connector  |

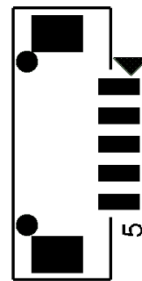
### Speaker connector: CN4

| Pin | Description |
|-----|-------------|
| 1   | SPKOUT_L+   |
| 2   | SPKOUT_L-   |
| 3   | SPKOUT_R+   |
| 4   | SPKOUT_R-   |
| 5   | GND         |



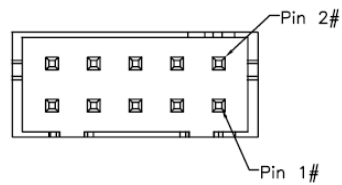
### USB2.0 connector: CN11

| Pin | Description |
|-----|-------------|
| 1   | USB Power   |
| 2   | D-          |
| 3   | D+          |
| 4   | GND         |
| 5   | GND         |



### USB2.0 connector: CN15

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1   | USB2_PWR    | 2   | USB2_PWR    |
| 3   | USB_DN      | 4   | USB_DN      |
| 5   | USB_DP      | 6   | USB_DP      |
| 7   | GND         | 8   | GND         |
| 9   | GND         | 10  | GND         |



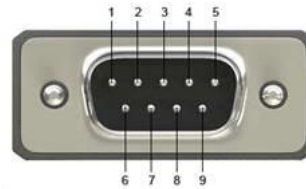


**DIO connector: CN17**

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1   | +5V         | 2   | +5V         |
| 3   | GPIO1       | 4   | GPIO2       |
| 5   | GPIO3       | 6   | GPIO4       |
| 7   | GPIO5       | 8   | GPIO6       |
| 9   | GPIO7       | 10  | GPIO8       |
| 11  | GND         | 12  | GND         |

**COM Port connector: COM1**

| Pin | RS232 <sup>[*]</sup> | RS422 <sup>[*]</sup> | RS485 <sup>[*]</sup> |
|-----|----------------------|----------------------|----------------------|
| 1   | DCD#                 | TX-                  | 485-                 |
| 2   | RXD                  | TX+                  | 485+                 |
| 3   | TXD                  | RX+                  | NC                   |
| 4   | DTR#                 | RX-                  | NC                   |
| 5   | GND                  | GND                  | GND                  |
| 6   | DSR#                 | NC                   | NC                   |
| 7   | RTS#                 | NC                   | NC                   |
| 8   | CTS#                 | NC                   | NC                   |
| 9   | RI# <sup>[**]</sup>  | NC                   | NC                   |

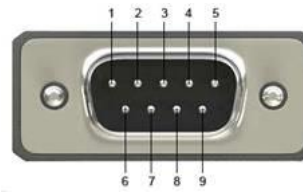


**[\*]:** Signals of COM1 can be RS-232/422/485 by selecting BIOS table.

**[\*\*]:** Pin 9 of COM1 can be RI/5V/12V by selecting BIOS table.

**COM Port connector: COM2**

| Pin | RS232 |
|-----|-------|
| 1   | DCD#  |
| 2   | RXD   |
| 3   | TXD   |
| 4   | DTR#  |
| 5   | GND   |
| 6   | DSR#  |
| 7   | RTS#  |
| 8   | CTS#  |
| 9   | RI#   |



**AT/ATX switch: SW2**

| Pin | Description                     |
|-----|---------------------------------|
| 1   | Disable auto power on (default) |
| 2   | Enable auto power on            |



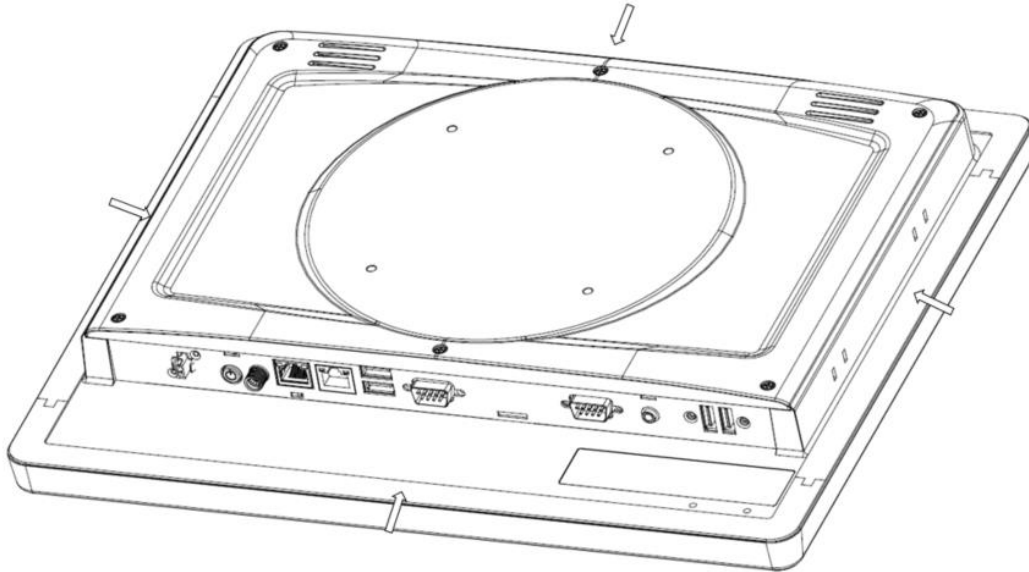
## 2.2 Mountings – Panel/Wall/Desktop/VESA

There are several ways to mount the GOT115-319: Wall, desktop, VESA and panel mounting.

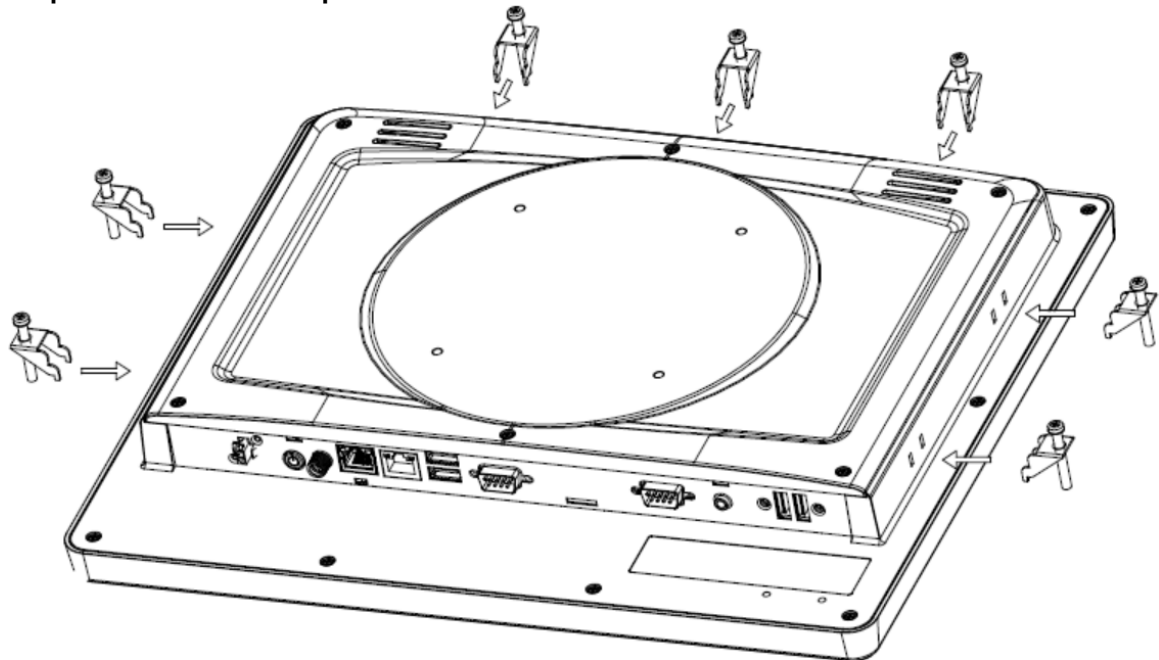
### 2.2.1 Panel-Mounting (optional)

The GOT115-319 is designed for panel mount application.

**Step1** Sticks four sealing pads on the edges of the chassis.



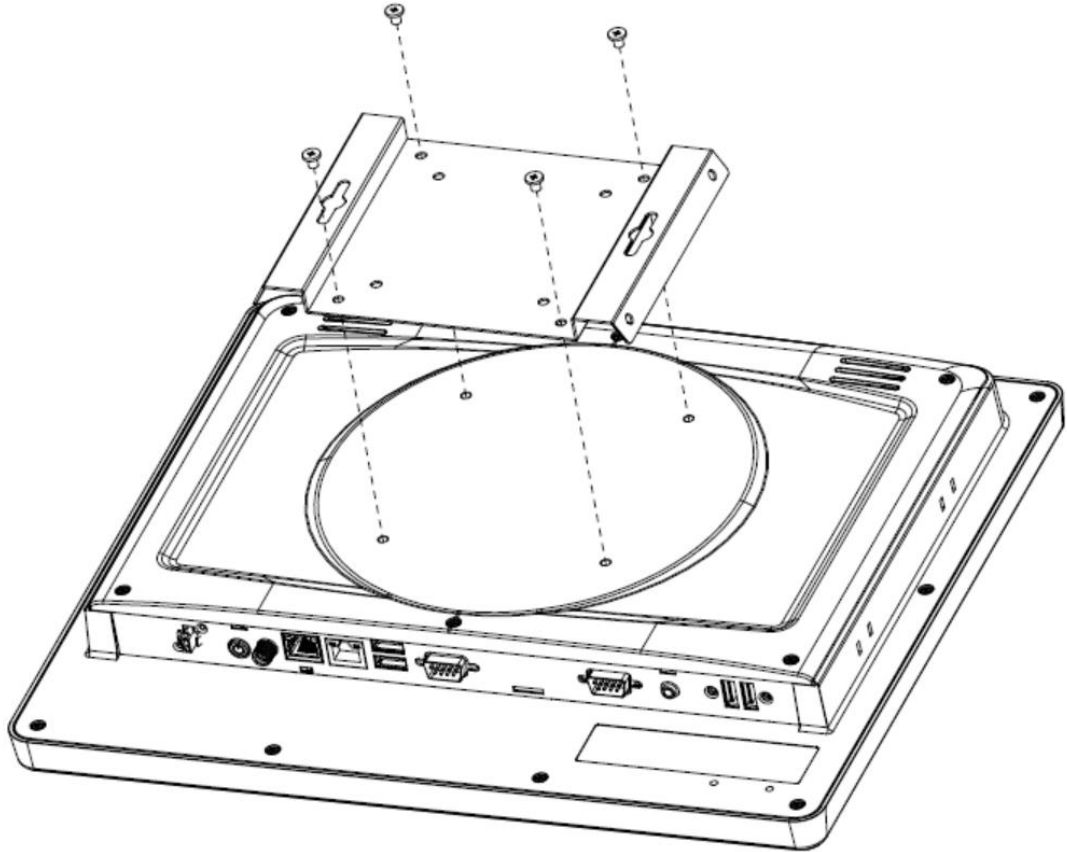
**Step2** Assemble the panel kit onto the chassis and fasten the five screws.



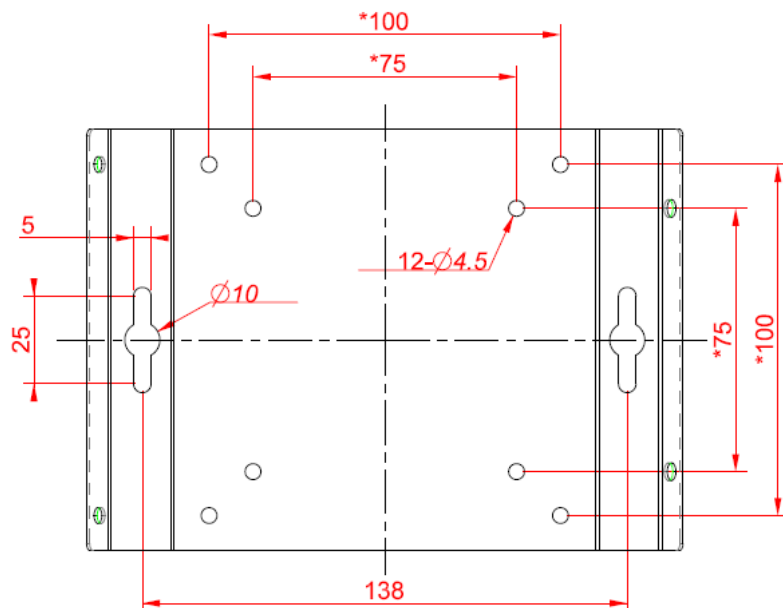
## 2.2.2 Assembling the Wall Mount Bracket

The GOT115-319 provides a wall mount bracket (VESA 100 x 100 mm). Screw four screws to fix the kit in the back chassis.

**Step 1** Find out the screw holes to assemble the wall mount bracket on the back side of the chassis with four screws.



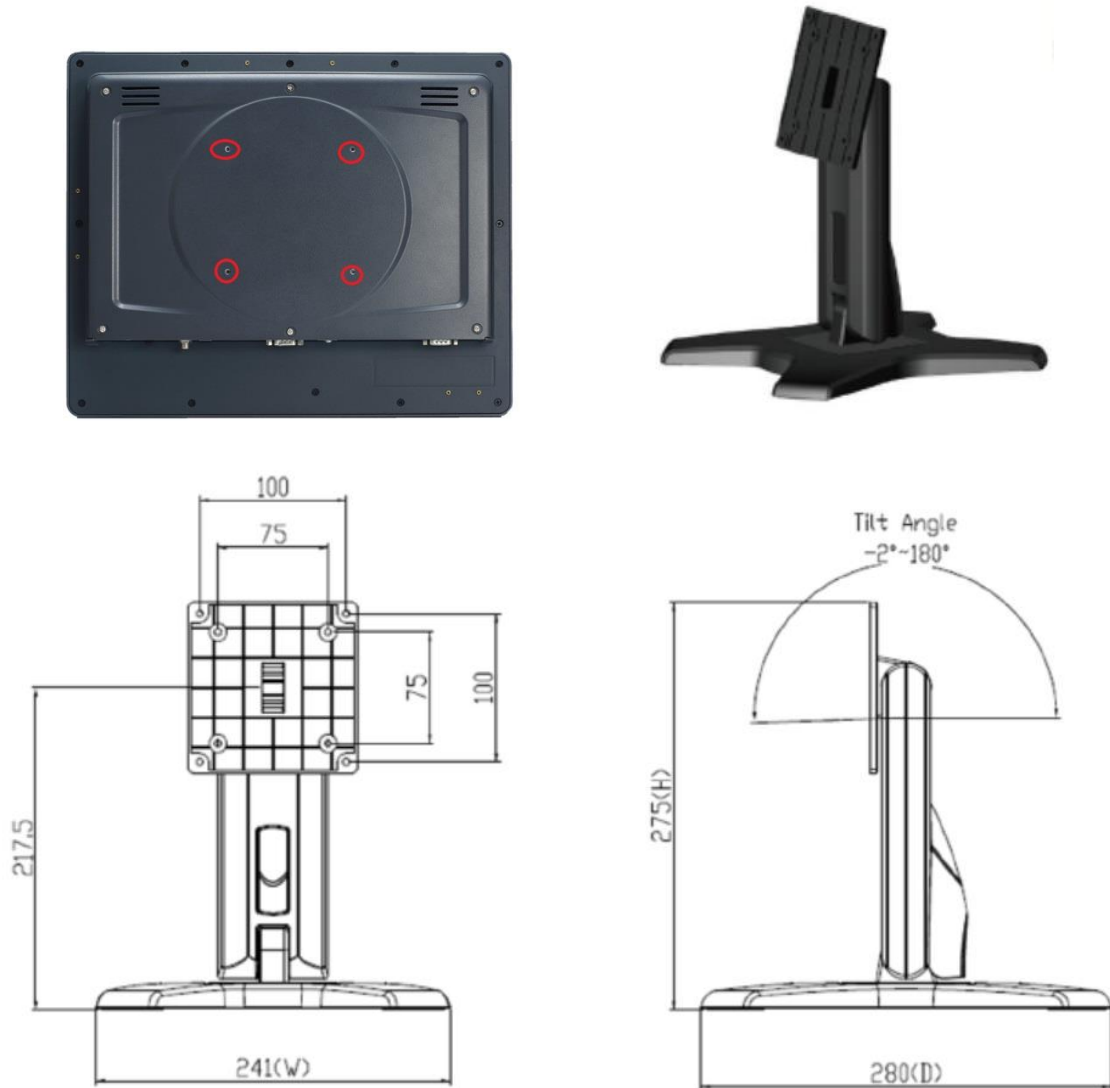
### Wall-Mount Bracket Dimension



### 2.2.3 Assembling the stand

The GOT115-319 supports VESA mount: 100 x 100 mm. Screw four screws to fix the stand kit in the back chassis.

Find out the screw holes to assemble the stand kit with four screws, as shown by the red marks in the below picture.



## 2.3 Storage Installation

### 2.3.1 mSATA Installation

The GOT115-319 provides a Mini Card slot for users to install mSATA. Please refer to the following instructions for installation:

**Step 1** Turn off the system, and unplug the power cord.

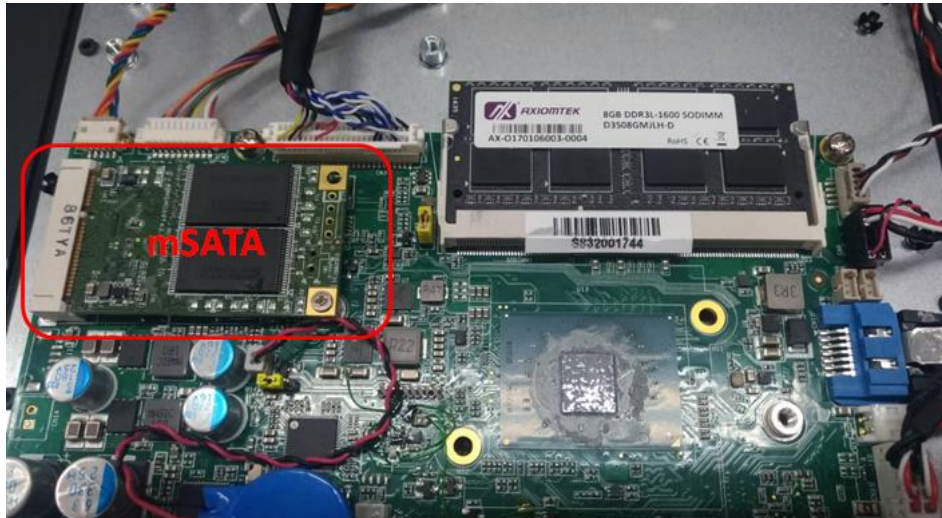
**Step 2** Unscrew and remove the back cover.



**Step 3** Locate the Mini Card slot on the main board.



**Step 4** Insert the mSATA card into the Mini Card slot. Screw it firmly on the slot.



**NOTE** The type of screws used for the Mini Card slot is M2.

### 2.3.2 MicroSD Card Installation

The GOT115-319 provides one MicroSD card slot for users to install a MicroSD card.

**Step 1** Push the MicroSD card into the slot until it has been locked firmly.



### 2.3.3 HDD Installation

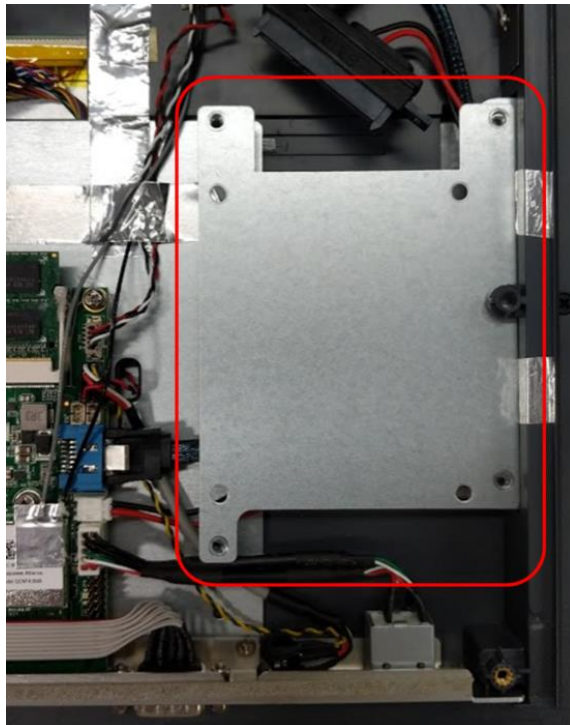
The GOT115-319 support one 2.5" SATA HDD/SSD. Please refer to the following instructions for installation:

**Step 1** Turn off the system, and unplug the power cord.

**Step 2** Unscrew and remove the back cover.

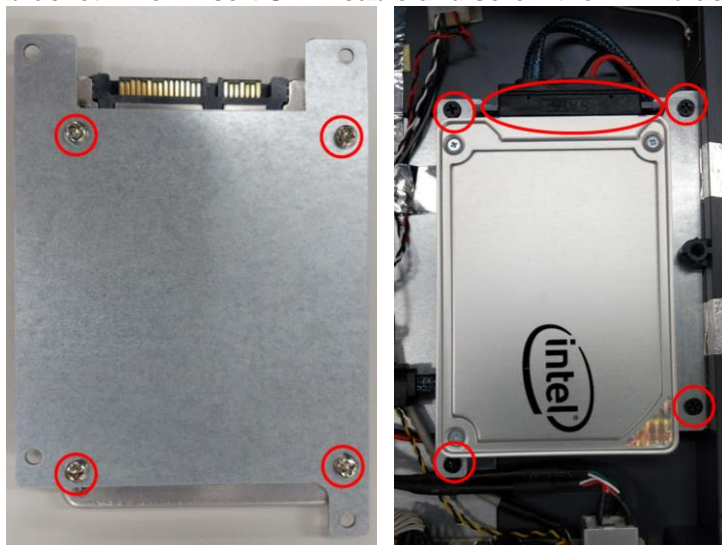


**Step 3** Find out the HDD bracket beside the main board.





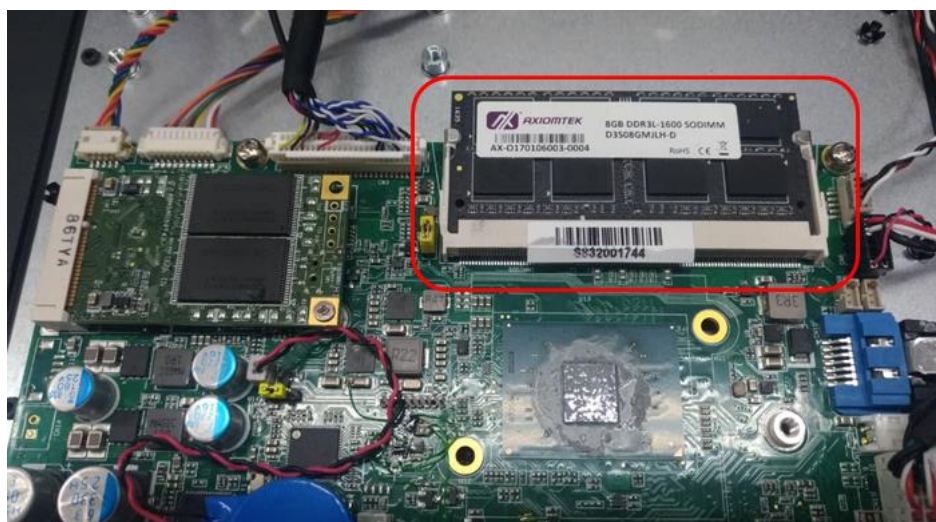
**Step 4** Attach the HDD/SSD to the bracket: Tighten screws on the rear of the HDD bracket. Then insert SATA cable and screw the HDD bracket to enclosure.



## 2.4 DRAM Installation

The GOT115-319 provides one 204-pin DDR3L SODIMM socket that supports system memory up to 8GB. Please follow steps below to install the memory modules:

- Step 1** Insert the DRAM into the DIMM socket, and then push it down firmly until it is clipped by the socket.



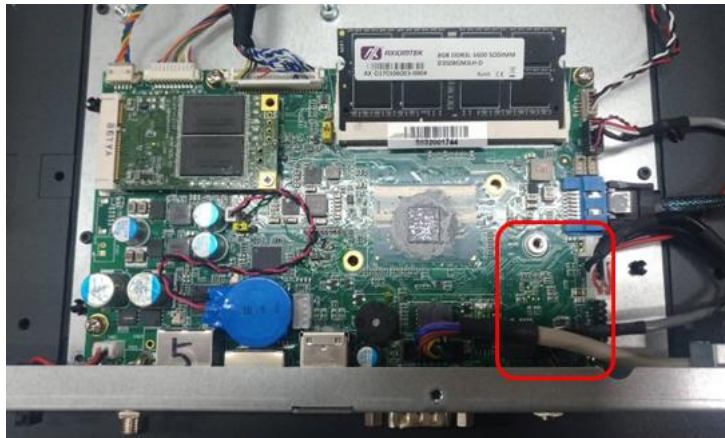
- Step 2** Rip off the mylar from the thermal pad on the back cover of enclosure.



## 2.5 M.2 Wireless Card Installation

The GOT115-319 supports one M.2 slot for wireless module (option) installation. Please find instructions as follows:

**Step 1** Open the back cover and locate the M.2 card slot on the main board in the marked area below.



**Step 2** Insert the M.2 wireless card into the M.2 slot as shown in the red mark area.

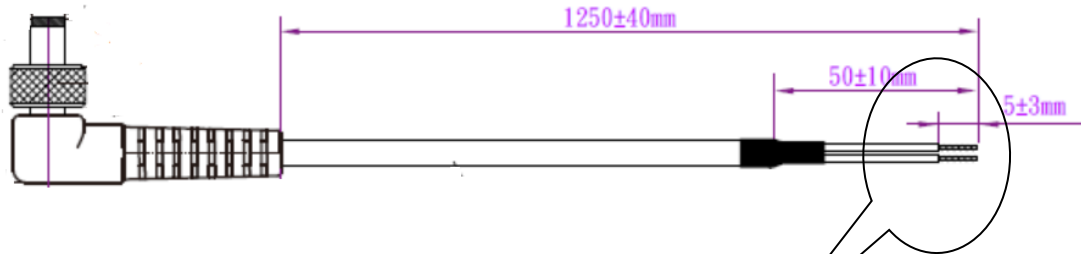


**Step 3** Screw the card firmly on the slot and connect the antenna cable, as shown in the red mark area.



## 2.6 Power Input (DC cable)

Axiomtek provides a cable for the DC jack connector to connect to a DC source. It adopts 9~24VDC. Please follow the signs on the power connector to connect to a DC power source.



| Pin | Description       | Color |
|-----|-------------------|-------|
| 1   | +: Power positive | White |
| 2   | -: Power negative | Black |



**NOTE** The safety ground must be connected to ensure proper operation of the unit.

# Chapter 3

## AMI BIOS Setup Utility

This section provides users with detailed descriptions about how to set up basic system configuration through the AMI BIOS setup utility.

### 3.1 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F2>, <F3>, <F4>, <Enter>, <ESC>, arrow keys, etc. (as listed in Table 3-1).



**NOTE:** Some of the navigation keys may differ from one screen to another.

Table 3-1 Descriptions of hot keys

| Hot Keys                  | Descriptions  |
|---------------------------|---|
| <→> and <←><br>Left/Right | The <→> and <←> keys are used to select a setup screen.   |
| <↑> and <↓><br>Up/Down    | The <↑> and <↓> keys are used to select a setup screen or sub-screen.   |
| <+> and <-><br>Plus/Minus | The <+> and <-> keys are used to change the field value of a particular setup item.   |
| <Tab>                     | The <Tab> key is used to select setup fields.   |
| <F1>                      | The <F1> key is used to display the general help screen.  |
| <F2>                      | The <F2> key is used to load previous values.   |
| <F3>                      | The <F3> key is used to load optimized defaults.  |
| <F4>                      | The <F4> key is used to save any changes made then exit the setup. Press the <F4> key to save any changes.  |
| <Esc>                     | The <Esc> key is used to discard any changes made then exit the setup. Press the <Esc> key to exit the setup without saving your changes.                         |
| <Enter>                   | The <Enter> key is used to display or change the setup option listed for a particular setup item. The <Enter> key is also used to display the setup sub- screens. |

## 3.2 Main Menu

Figure 3-1 Main menu

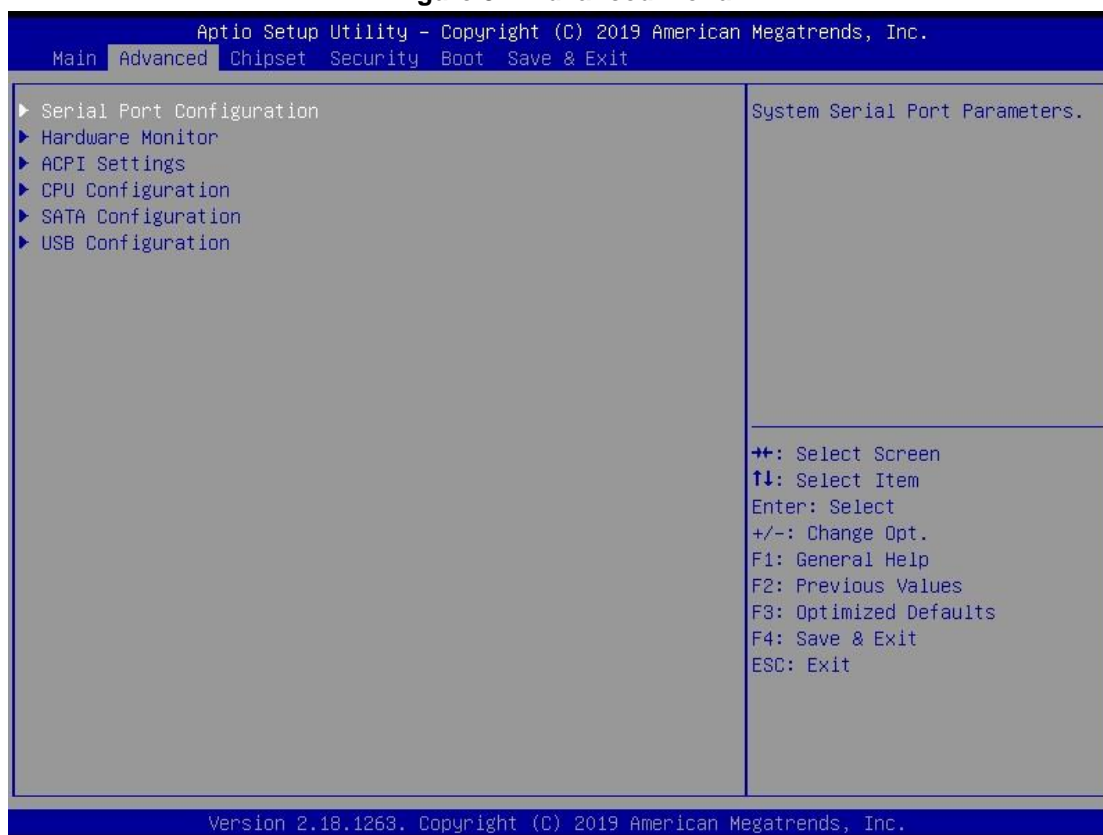


### System Time/Date

Use this option to change the system time and date. Highlight *System Time* or *System Date* using the up/ down/ left and right arrow keys (see Figure 3-1). Enter new values through the keyboard. Press the <Tab> key or the arrow keys to move between fields. The date entered must be in MM/DD/YY format. The time is entered in HH:MM:SS format.

### 3.3 Advanced Menu

Figure 3-2 Advanced menu



The Advanced menu allows users to set configurations of the CPU and other system devices. Select any item on the left to go to the sub-menus (as shown in Figure 3-2).

- ▶ *Serial Port Configuration*
- ▶ *Hardware Monitor*
- ▶ *ACPI Settings*
- ▶ *CPU Configuration*
- ▶ *SATA Configuration*
- ▶ *USB Configuration*

Simply highlight the item of choice, then press <Enter> to go to sub-menus for more specific options.

### 3.3.1 Serial Port Configuration

- ▶ Serial Port 1 Configuration (COM1)
- ▶ Serial Port 2 Configuration (COM2)

#### Serial port

This option is used to enable or disable serial port COM1/COM2.

#### Device Setting

This item specifies the base I/O port address and Interrupt Request (IRQ) address of a serial port.

Optimal setting for Port 1 is [3F8h/IRQ4].

Optimal setting for Port 2 is [2F8h/IRQ5].

#### COM 1 Port Type

Serial Port 1 Configuration is used to select COM Port Type: [RS-232] or [RS-422] or [RS-485].

COM1 RI Setting is used to select COM Port Type: [RI] or [5V] or [+12V]

**Figure 3-3 'Serial Port Configuration' -> 'COM Port Type'**

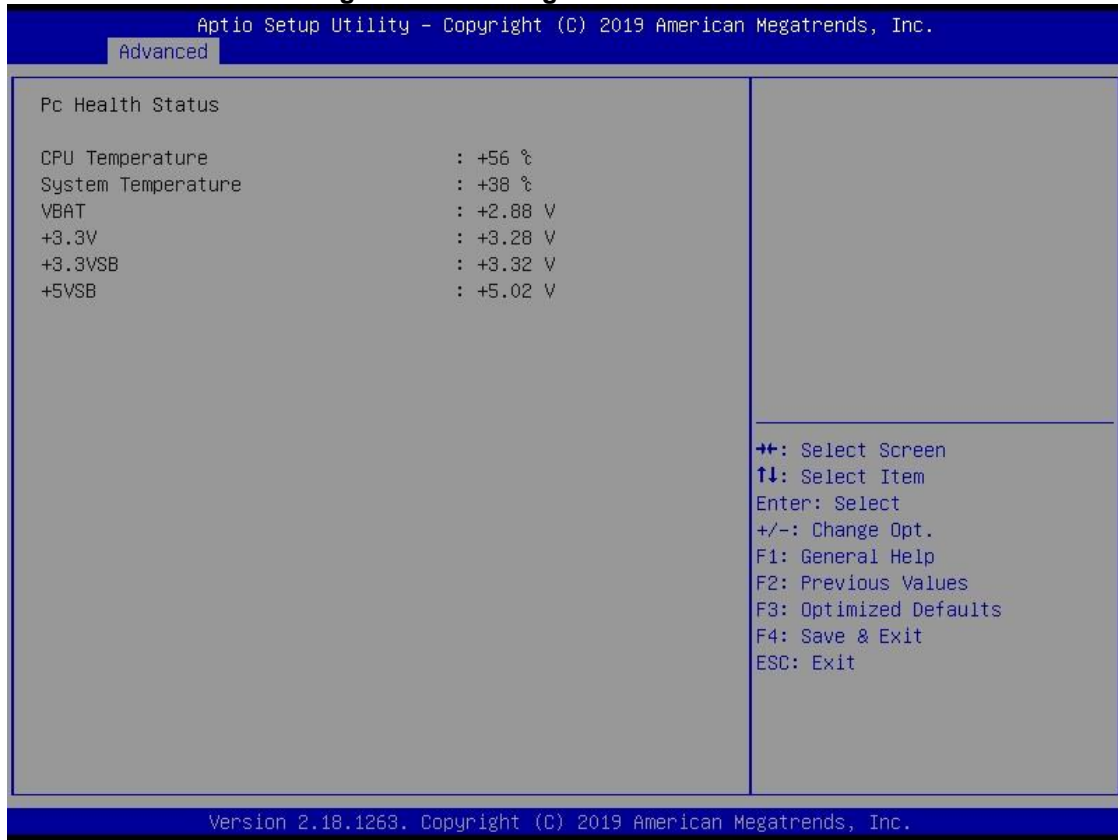




### 3.3.2 Hardware Monitor

Figure 3-4 shows a screen reflecting the 'PC Health Status' of the hardware in real time.

**Figure 3-4 Entering 'Hardware Monitor'**



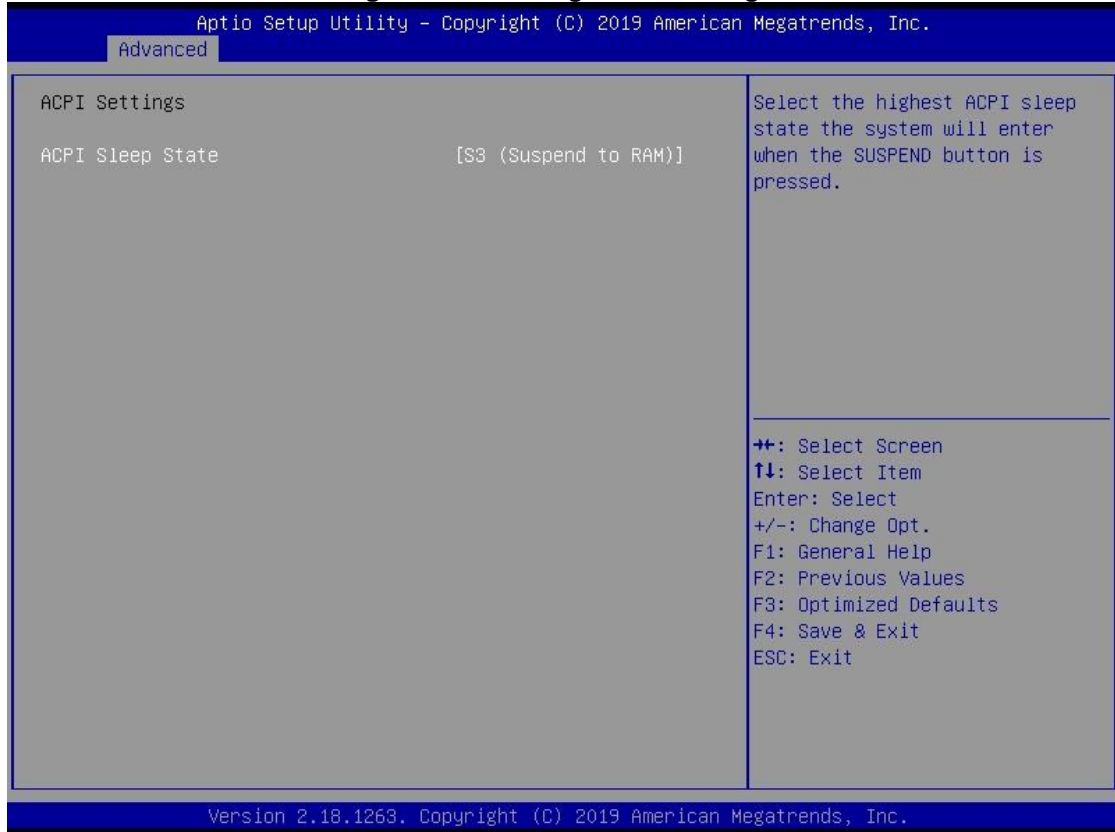
### 3.3.3 ACPI Settings

This screen is used to select options of the ACPI Configuration, and then change the value of the selected option. A description of the selected item appears on the right side of the screen.

#### ACPI Sleep State

This item allows users to select the *Advanced Configuration and Power Interface* (ACPI) state to be used for system suspension. There are two choices under this selection: [Suspend Disable] or [S3 (Suspend to RAM)] (as shown in Figure 3-5).

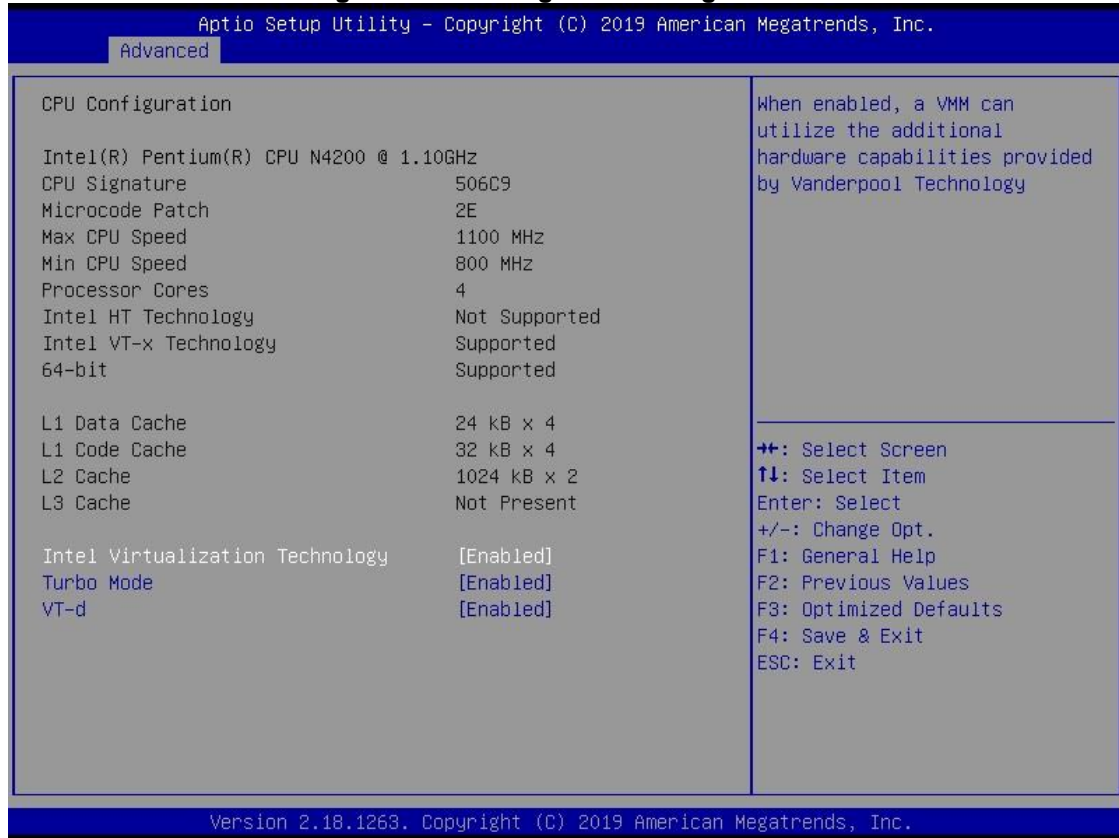
**Figure 3-5 Entering 'ACPI Settings'**



### 3.3.4 CPU Configuration

Figure 3-6 shows a page of CPU configuration with the item *Intel Virtualization Technology* highlighted for [Enabled] or [Disabled].

**Figure 3-6 Entering 'CPU Configuration'**



### 3.3.5 SATA Configuration

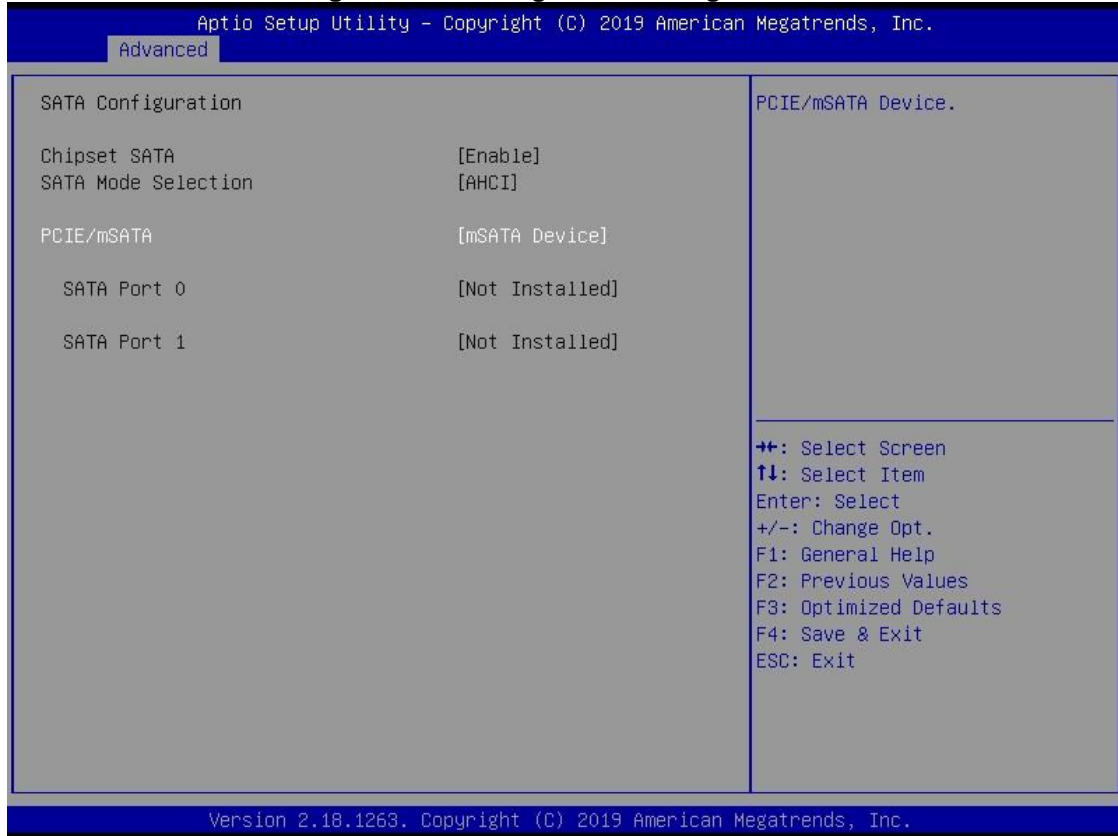
This screen allows users to select options for SATA Configuration, and then change the value of the selected option (see Figure 3-7).

#### SATA Controller

Highlight *Chipset SATA* to set up SATA Controller to be [Enable] or [Disable].

Highlight *PCIE/mSATA* to set up PCIE/mSATA Mini Card Configuration, Here are the options for the selection of PCIe and mSATA

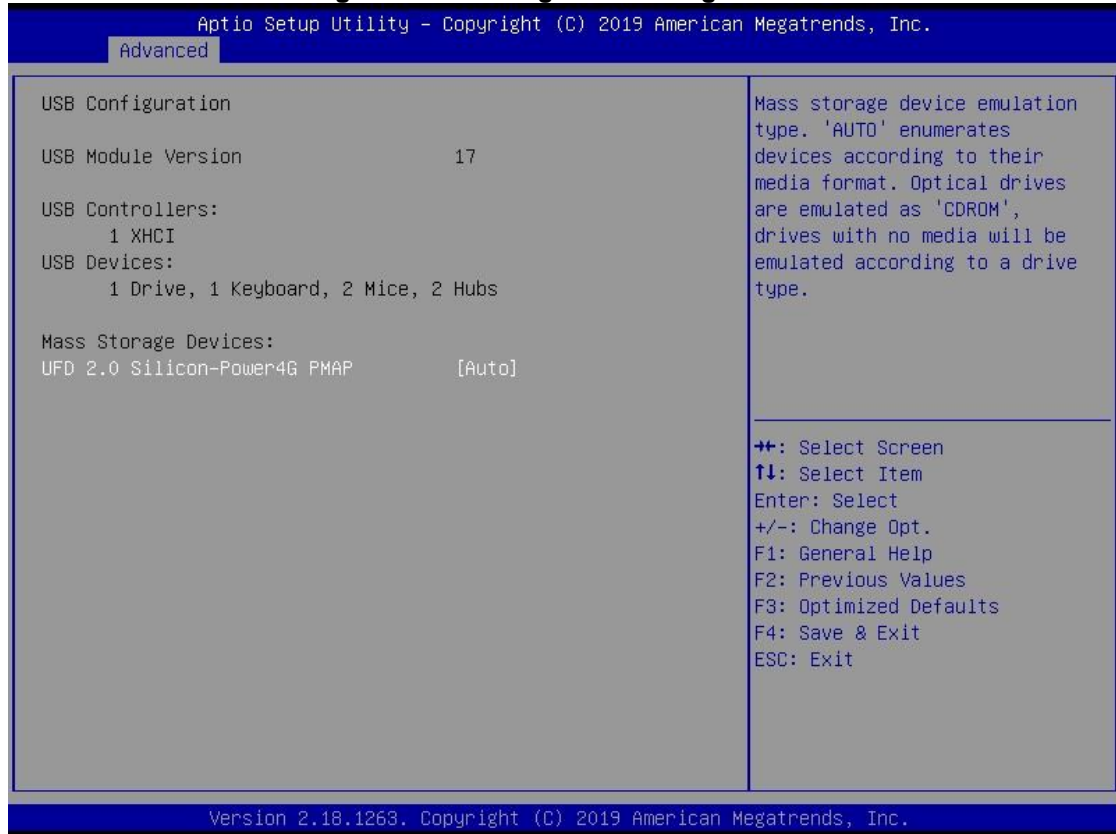
**Figure 3-7 Entering 'SATA Configuration'**



### 3.3.6 USB Configuration

Please see Figure 3-8 to find out what items can be set up under the page of *USB Configuration*.

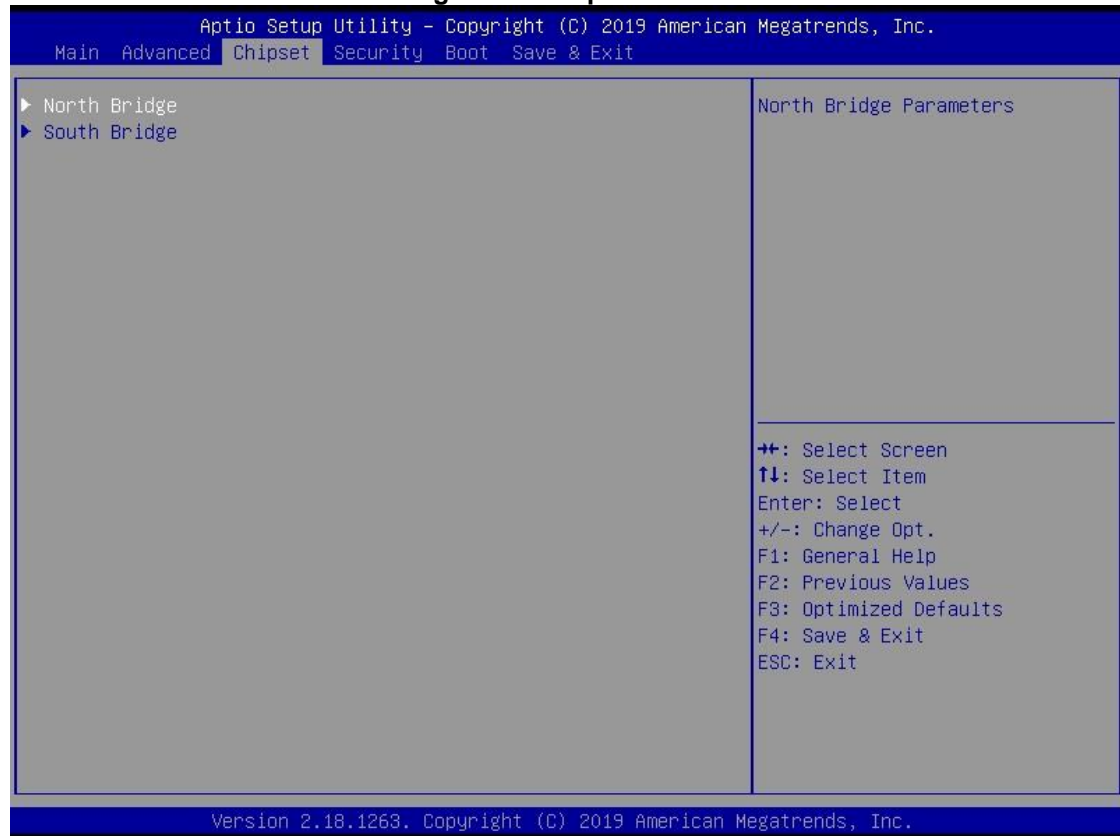
**Figure 3-8 Entering 'USB Configuration'**



## 3.4 Chipset Menu

The Chipset menu gives memory information about the North Bridge and South Bridge (see Figure 3-9).

Figure 3-9 Chipset menu



### 3.4.1 North Bridge

North Bridge memory information is shown in Figure 3-10.

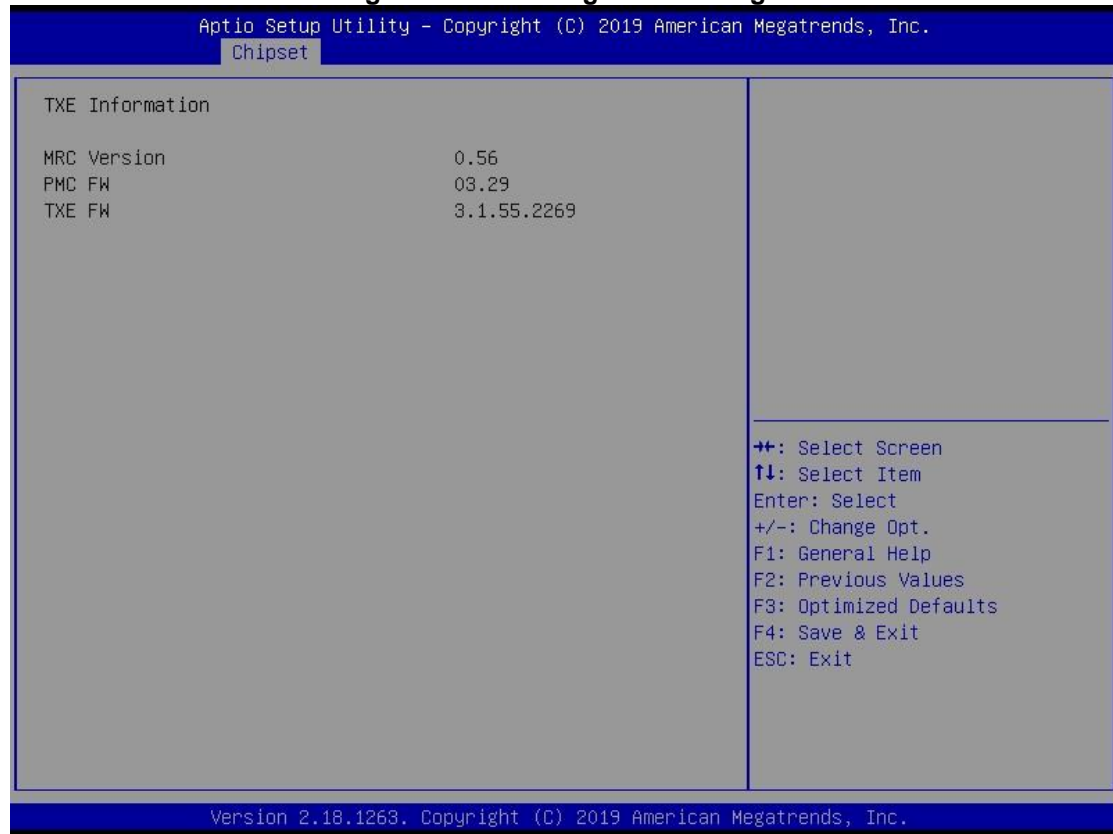
**Figure 3-10 Entering 'North Bridge'**



### 3.4.2 South Bridge

South Bridge TXE information is shown in Figure 3-11.

**Figure 3-11 Entering 'South Bridge'**

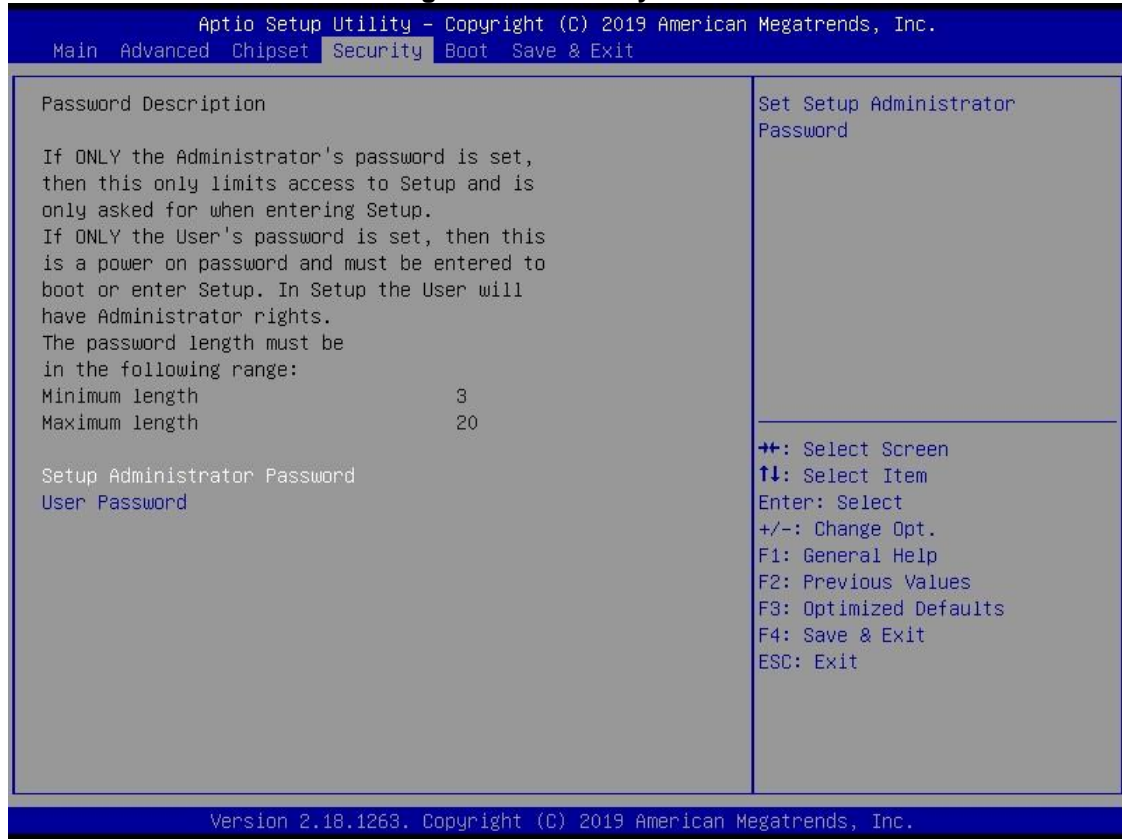




## 3.5 Security Menu

You may set the administrator/user password for the system.

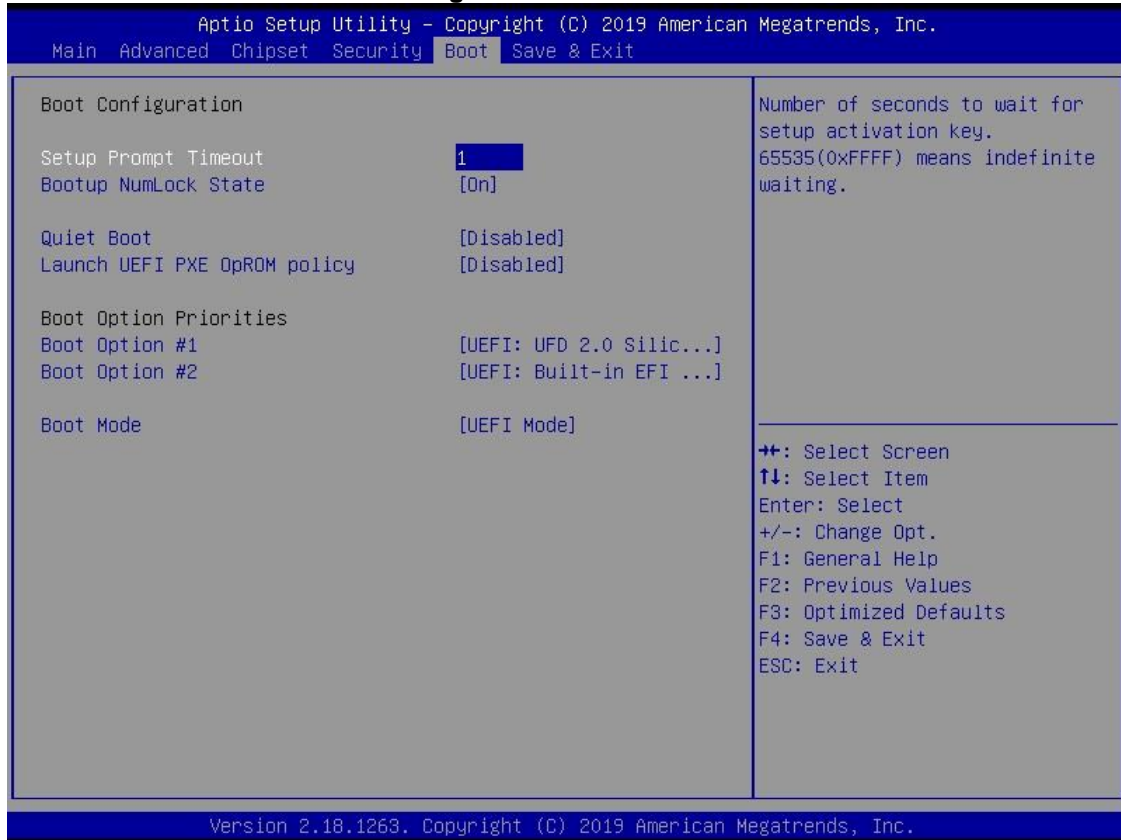
**Figure 3-12 Security Menu**



## 3.6 Boot Menu

The Boot menu allows users to change boot options of the system. Users can highlight any of the items on the left frame of the screen to go to any particular sub menus (as shown in Figure 3-13).

**Figure 3-13 Boot Menu**



### Setup Prompt Timeout

Enter a numeric value here as the length for timeout.

### Bootup NumLock State

Use this item to select the power-on state for the NumLock. The default setting is [On].

### Quiet Boot

Use this item to enable or disable the Quiet Boot state. The default setting is [Disabled].

### Launch UEFI PXE OpROM policy

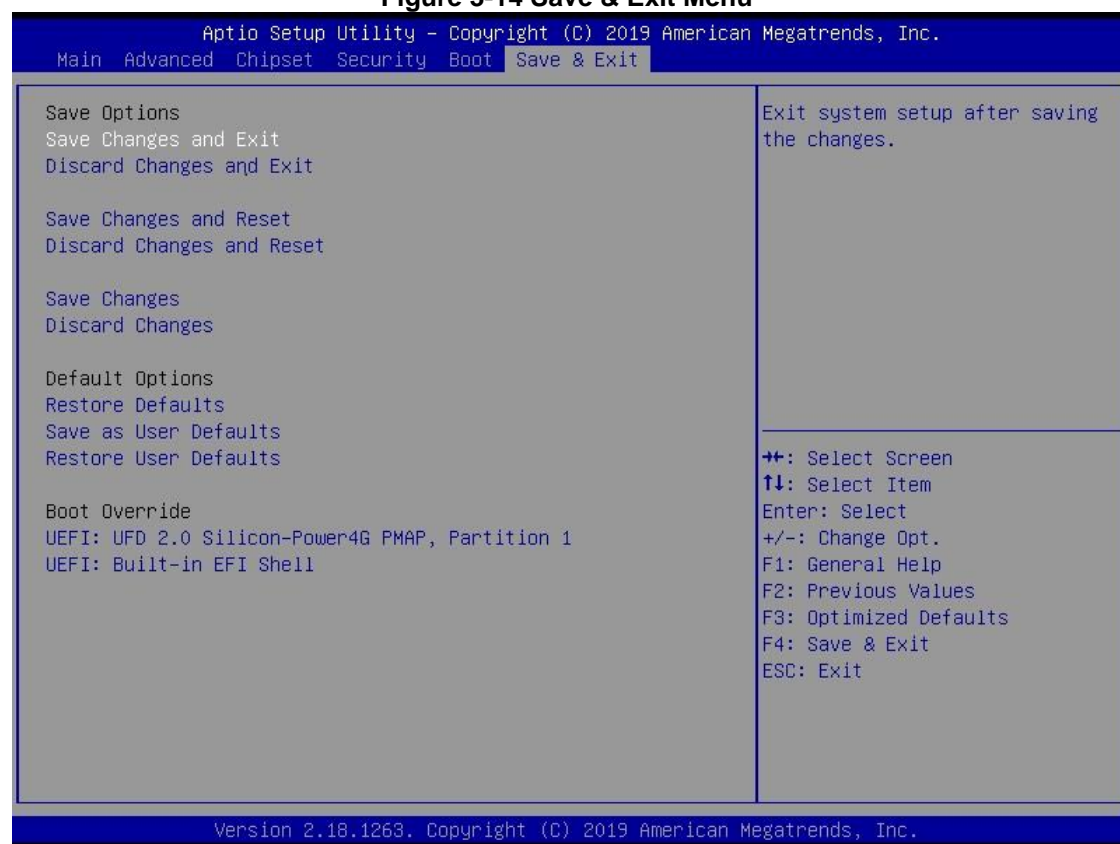
Use this item to enable or disable the Pre-boot Execution Environment (PXE) under UEFI mode. The default setting is [Disabled].

### Boot Option Priorities

Use this item to specify the overall boot order among the available devices.

## 3.7 Save & Exit Menu

Figure 3-14 Save & Exit Menu



### Save Changes and Exit

When users have completed the system configuration changes, select this option to leave Setup and return to Main Menu. Select Save Changes and Exit from the Save & Exit menu and press <Enter>. Select Yes to save changes and exit.

### Discard Changes and Exit

Select this option to quit Setup without making any permanent changes to the system configurations and return to Main Menu. Select Discard Changes and Exit from the Save & Exit menu and press <Enter>. Select Yes to discard changes and exit.

### Save Changes and Reset

When users have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configurations take effect. Select Save Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to save changes and reset.

### Discard Changes and Reset

Select this option to quit Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to discard changes and reset.

**Save Changes**

After completing the system configuration changes, select this option to save changes. Select Save Changes from the Save & Exit menu and press <Enter>. Select Yes to save changes.

**Discard Changes**

Select this option to quit Setup without making any permanent changes to the system configurations. Select Discard Changes from the Save & Exit menu and press <Enter>. Select Yes to discard changes.

**Restore Defaults**

It automatically sets all Setup options to a complete set of default settings when users select this option. Select Restore Defaults from the Save & Exit menu and press <Enter>.

**Save as User Defaults**

Select this option to save system configuration changes done so far as User Defaults. Select Save as User Defaults from the Save & Exit menu and press <Enter>.

**Restore User Defaults**

It automatically sets all Setup options to a complete set of User Defaults when users select this option. Select Restore User Defaults from the Save & Exit menu and press <Enter>.

**Boot Override**

Select a drive to immediately boot that device regardless of the current boot order.

# Chapter 4

## Drivers Installation

### 4.1 System

The GOT115-319 supports Windows 10 pro and Windows 10 IoT Enterprise. To facilitate the installation of the system driver, please carefully read the instructions in this chapter before installation.

#### 4.1.1 Windows 10

1. Download the driver from Axiomtek website

<https://www.axiomtek.com/Default.aspx?MenuId=Products&FunctionId=DownloadSearch>

2. Search by Model Name and SUBMIT

3. Click the Download File to download the driver. "Setup.exe" in each folder and follow the instructions to complete installation.

| Drivers    |            |   |         |               |
|------------|------------|---|---------|---------------|
| Date       | Model      | Description                                     | Version | Download File |
| 2019/12/23 | GOT115-319 | Option  | VA1.0   | 811,741.9KB   |
| 2019/12/23 | GOT115-319 | Touch driver (only for resistive touch version) | VA1.0   | 5,257.3KB     |
| 2019/12/23 | GOT115-319 | TXE driver                                      | VA1.0   | 44,242.1KB    |
| 2019/12/23 | GOT115-319 | Audio driver                                    | VA1.0   | 220,010.6KB   |
| 2019/12/23 | GOT115-319 | LAN driver                                      | VA1.0   | 375,769.5KB   |
| 2019/12/23 | GOT115-319 | Graphic driver                                  | VA1.0   | 323,051.6KB   |
| 2019/12/23 | GOT115-319 | Chipset driver                                  | VA1.0   | 2,621.1KB     |

## 4.2 Touch Screen

The GOT115-319 adopts a projected capacitive multi-touch screen or 5-wired analog resistive touch. The specification is listed in Table 4-1 below. The touch driver will be installed automatically to enable the touch panel's two-finger touch functions based on the Windows 10 and Windows IoT Enterprise support.

**Table 4-1 Touch screen specification**

|                                |  |
|--------------------------------|--|
| <b>Touch Screen</b>            | 5-wired analog resistive touch               |
| <b>Touch Screen Controller</b> | Penmount 6000 USB touch Screen Controller IC |
| <b>Communications</b>          | USB interface                                |
| <b>Resolution</b>              | 1024 x 1024 resolution                       |
| <b>Power Input</b>             | 5V   |
| <b>Power Consumption</b>       | Active: 24.6mA / Idle Mode: 13.4mA           |
| <b>Input Method</b>            | Finger or Cap.Stylus                         |
| <b>Calibration</b>             | Non-Calibration                              |

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>Touch Screen</b>            | Projected Capacitive Multi-touch |
| <b>Touch Screen Controller</b> | COF                              |
| <b>Communications</b>          | USB interface                    |
| <b>Resolution</b>              | 4096 x 4096 resolution           |
| <b>Power Input</b>             | 5V                               |
| <b>Power Consumption</b>       | Active: <100mA / Idle Mode: 50mA |
| <b>Input Method</b>            | Finger or Cap.Stylus             |
| <b>Calibration</b>             | Non-Calibration                  |

# Appendix A

## Watchdog Timer & DIO Programming

### About Watchdog Timer

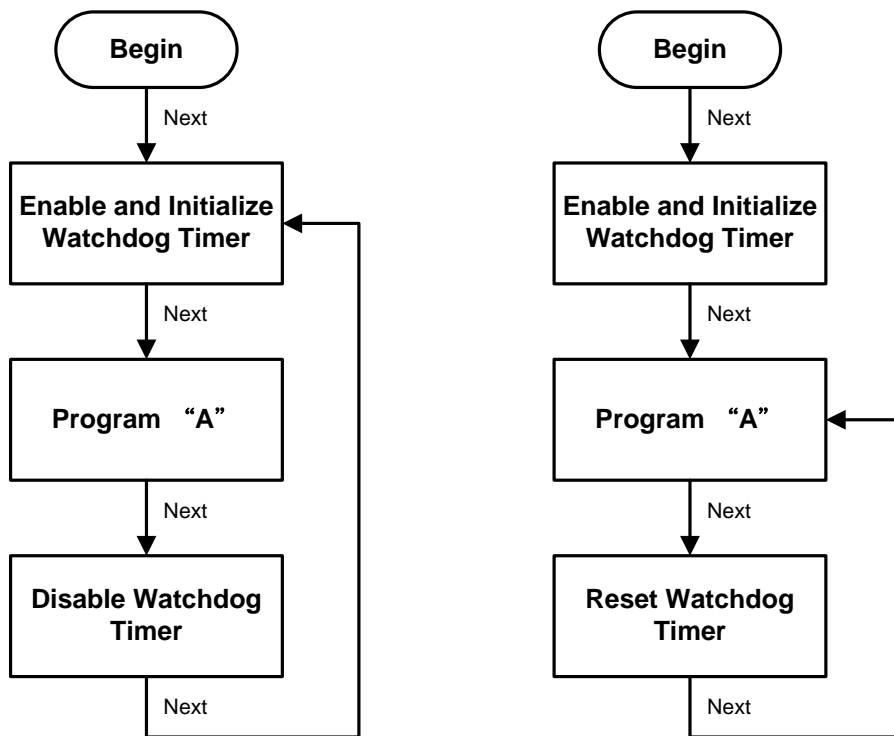
Software stability is a major issue in most applications. Some embedded systems are not watched by humans for 24 hours. It is usually too slow to wait for someone to reboot when a computer hangs. The system needs to be able to reset automatically when things go wrong. The watchdog timer gives us that solution.

The watchdog timer is a counter that triggers a system reset when it counts down to zero from a preset value. The software starts the counter with an initial value and must reset it periodically. If the counter ever reaches zero which means the software has crashed, the system will reboot.

### How to Use Watchdog Timer

The I/O port base addresses of the watchdog timer are 2E (hex) and 2F (hex). The 2E (hex) and 2F (hex) are address and data port respectively.

Assume that program A is put in a loop that must execute at least once every 10ms. Initialize the watchdog timer with a value bigger than 10ms. If the software has no problems, the watchdog timer will never expire because software will always restart the counter before it reaches zero.





## WDT Sample Program

Enable WDT

1. Enable configuration:
  - O 2E 87
  - O 2E 87
2. Select Logic device:
  - O 2E 07
  - O 2F 07
3. WDT device enable:
  - O 2E FA
  - O 2F 01
4. Set base timer:
  - O 2E F6
  - O 2F 0A → Set reset time (Ex.0A:10 Sec/Minute)
5. Set timer unit (bit[3]=0: Sec; bit[3]=1: Minute):
  - Enable watchdog time counting (bit5=1)
  - O 2E F5
  - O 2F 20 (Set timer unit to sec and enable counting)

## How to Use DIO Software Programming

### Digital I/O Software Programming

- I2C to GPIO PCA9535PW GPIO
- I2C address: 0b01000100.

#### Command byte

The command byte is the first byte to follow the address byte during a write transmission. It is used as a pointer to determine which of the following registers will be written or read.

**Table 4. Command byte**

| Command | Register                  |
|---------|---------------------------|
| 0       | Input port 0              |
| 1       | Input port 1              |
| 2       | Output port 0             |
| 3       | Output port 1             |
| 4       | Polarity Inversion port 0 |
| 5       | Polarity Inversion port 1 |
| 6       | Configuration port 0      |
| 7       | Configuration port 1      |

### Registers 0 and 1: Input port registers

This register is an input-only port. It reflects the incoming logic levels of the pins, regardless of whether the pin is defined as an input or an output by Register 3. Writes to this register have no effect.

The default value 'X' is determined by the externally applied logic level.

**Table 5. Input port 0 Register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | I0.7 | I0.6 | I0.5 | I0.4 | I0.3 | I0.2 | I0.1 | I0.0 |
| Default | X    | X    | X    | X    | X    | X    | X    | X    |

**Table 6. Input port 1 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | I1.7 | I1.6 | I1.5 | I1.4 | I1.3 | I1.2 | I1.1 | I1.0 |
| Default | X    | X    | X    | X    | X    | X    | X    | X    |

### Registers 2 and 3: Output port registers

This register is an output-only port. It reflects the outgoing logic levels of the pins defined as outputs by Registers 6 and 7. Bit values in this register have no effect on pins defined as inputs. In turn, reads from this register reflect the value that is in the flip-flop controlling the output selection, **not** the actual pin value.

**Table 7. Output port 0 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | O0.7 | O0.6 | O0.5 | O0.4 | O0.3 | O0.2 | O0.1 | O0.0 |
| Default | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |

**Table 8. Output port 1 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | O1.7 | O1.6 | O1.5 | O1.4 | O1.3 | O1.2 | O1.1 | O1.0 |
| Default | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |

### Registers 4 and 5: Polarity Inversion registers

This register allows the user to invert the polarity of the Input port register data. If a bit in this register is set (written with '1'), the Input port data polarity is inverted. If a bit in this register is cleared (written with a '0'), the Input port data polarity is retained.

**Table 9. Polarity Inversion port 0 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | N0.7 | N0.6 | N0.5 | N0.4 | N0.3 | N0.2 | N0.1 | N0.0 |
| Default | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

**Table 10. Polarity Inversion port 1 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | N1.7 | N1.6 | N1.5 | N1.4 | N1.3 | N1.2 | N1.1 | N1.0 |
| Default | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

**Registers 6 and 7: Configuration registers**

This register configures the directions of the I/O pins. If a bit in this register is set (written with '1'), the corresponding port pin is enabled as an input with high-impedance output driver. If a bit in this register is cleared (written with '0'), the corresponding port pin is enabled as an output. At reset, the device's ports are inputs.

**Table 11. Configuration port 0 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | C0.7 | C0.6 | C0.5 | C0.4 | C0.3 | C0.2 | C0.1 | C0.0 |
| Default | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |

**Table 12. Configuration port 1 register**

| Bit     | 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
|---------|------|------|------|------|------|------|------|------|
| Symbol  | C1.7 | C1.6 | C1.5 | C1.4 | C1.3 | C1.2 | C1.1 | C1.0 |
| Default | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |